

PRIOR ART

FIGURE 1

**2/20**

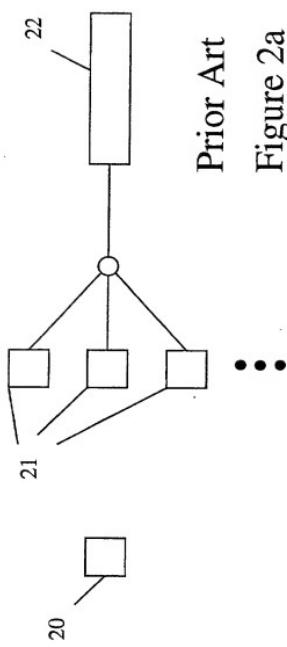


Figure 2a

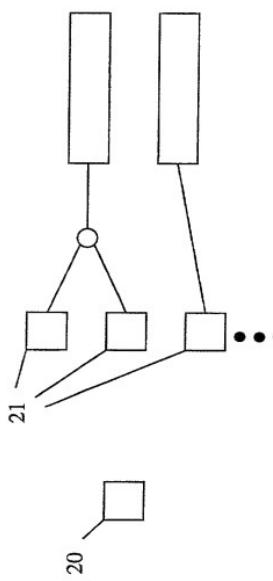
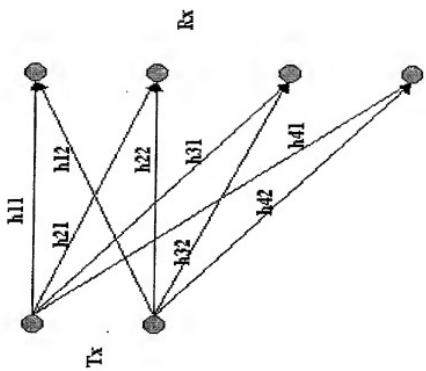
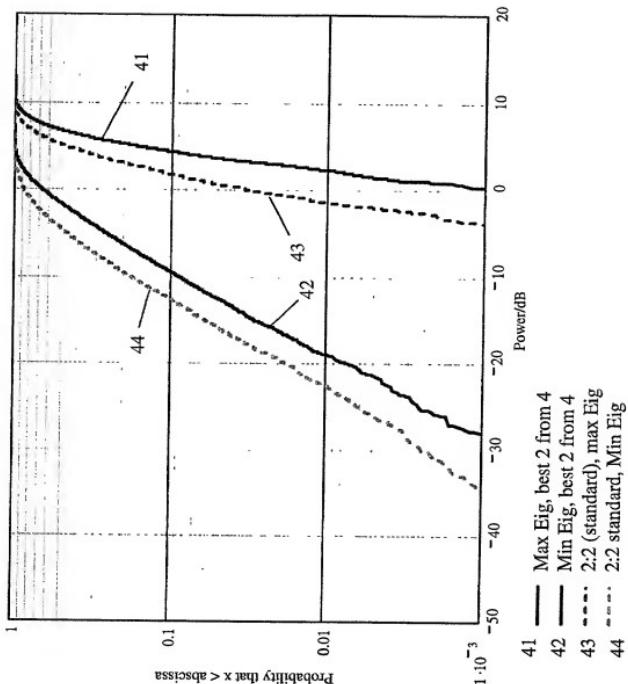


Figure 2b



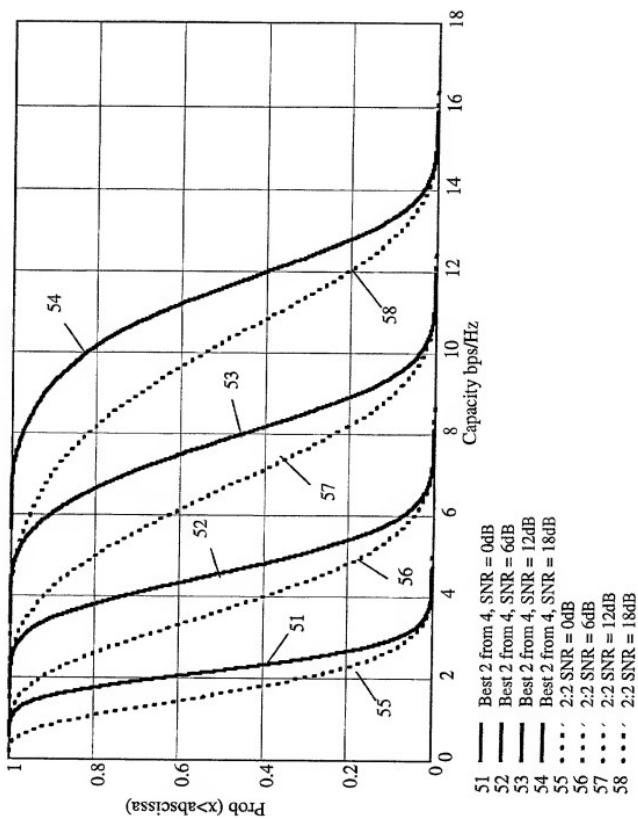
MIMO configuration with 2 Node B antennas and 4 UE antennas

Figure 3



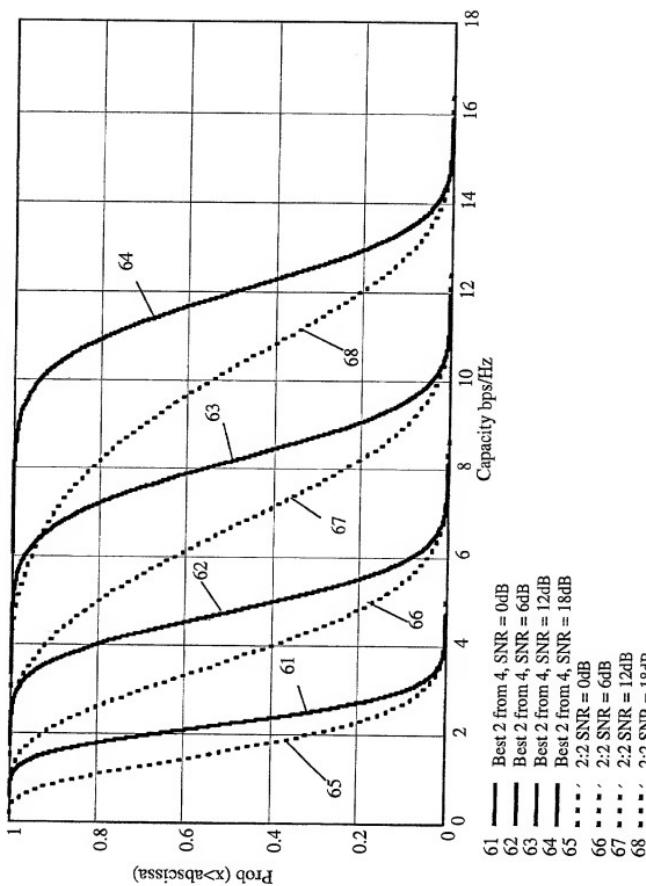
Comparison of eigenvalues for standard 2x2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum sum of eigenvalues as the selection metric.

Figure 4



Comparison of capacity distributions for standard 2:2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum sum of eigenvalues as the selection metric.

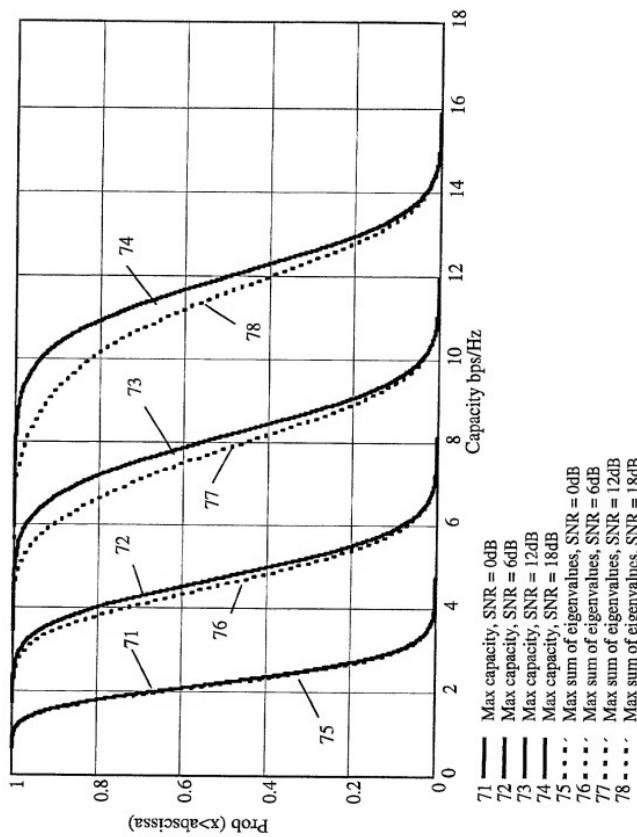
Figure 5



Comparison of capacity distributions for standard 2x2 MIMO and eigenvalue selection diversity (best 2 from 4) using the maximum instantaneous link capacity as the selection metric.

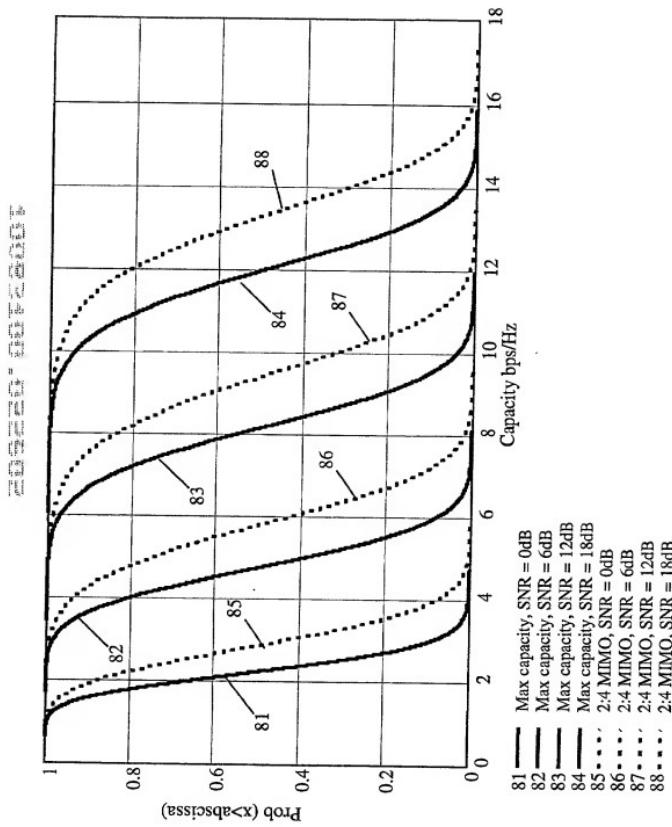
Figure 6

$$\frac{1}{\sqrt{2}} \left( \frac{1}{\sqrt{2}} \frac{1}{\sqrt{2}} \frac{1}{\sqrt{2}} \frac{1}{\sqrt{2}} \right) = \frac{1}{\sqrt{2}} \frac{1}{\sqrt{2}} \frac{1}{\sqrt{2}} \frac{1}{\sqrt{2}} = \frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{2}$$



Comparison of capacity distributions for the two eigenvalue selection diversity schemes

Figure 7



Comparison of 'maximum capacity' eigenvalue selection diversity and standard 2:4 MIMO capacity distributions.

Figure 8

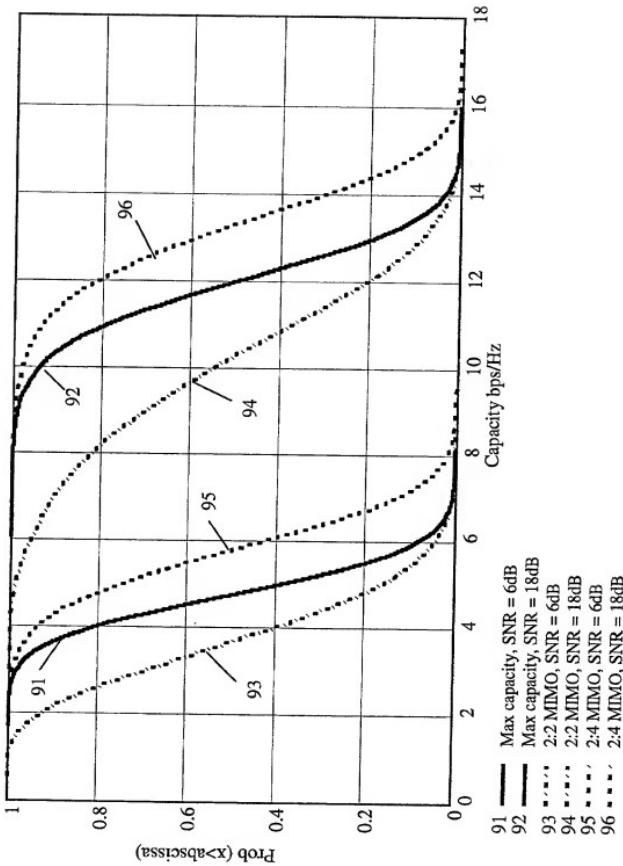


Figure 9

Comparison of maximum capacity eigenvalue selection diversity with 2:2 and 2:4 MIMO capacity curves

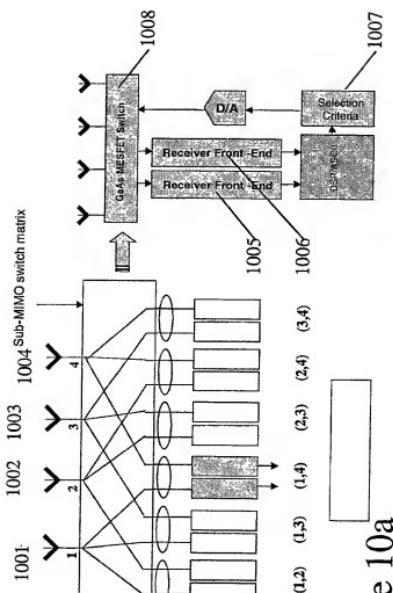
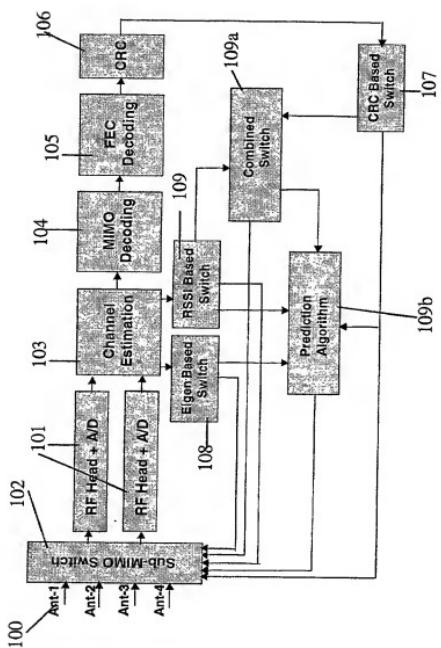


Figure 10a

<p>4-antenna</p> <p><math>(1,2) (1,3) (1,4) (2,3) (2,4) (3,4)</math></p> <p>disjoint switch</p> <p>example of overlap switch (keep Ant #1)</p>	<p>6-antenna</p> <p><math>(1,2) (1,3) (1,4) (1,5) (1,6) (2,3) (2,4) (2,5)</math>  <math>(2,6) (3,4) (3,5) (3,6) (4,5) (4,6) (5,6)</math></p> <p>disjoint switch</p> <p>example of overlap switch (keep Ant #1)</p>
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Figure 10b

Figure 10c



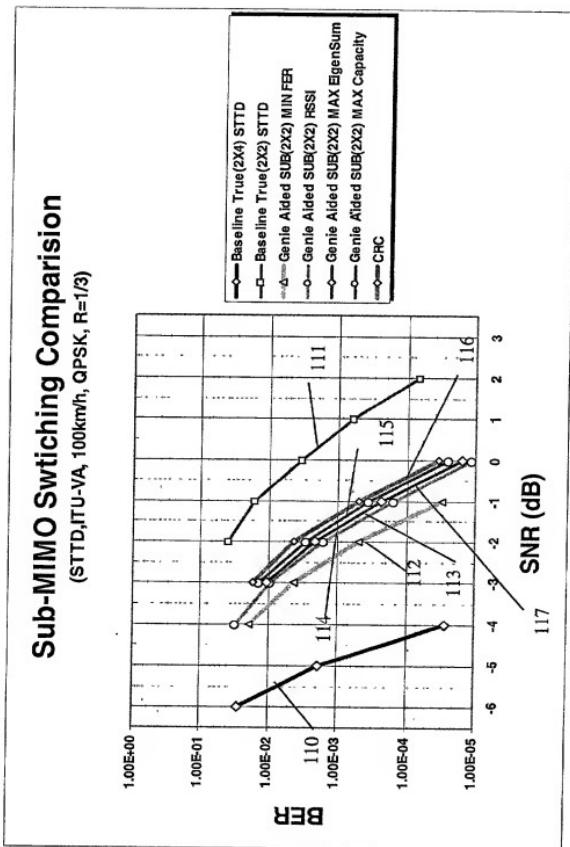


Figure 11

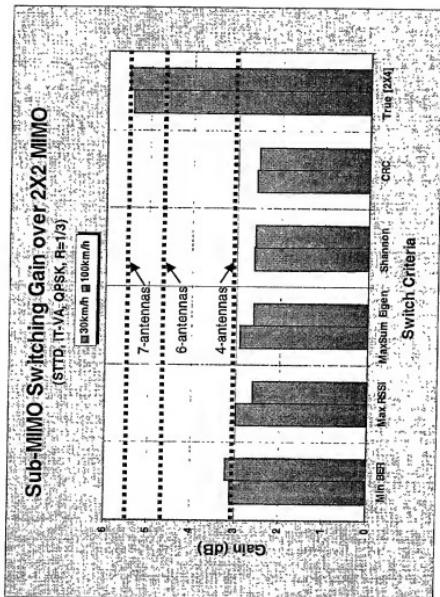


Figure 12

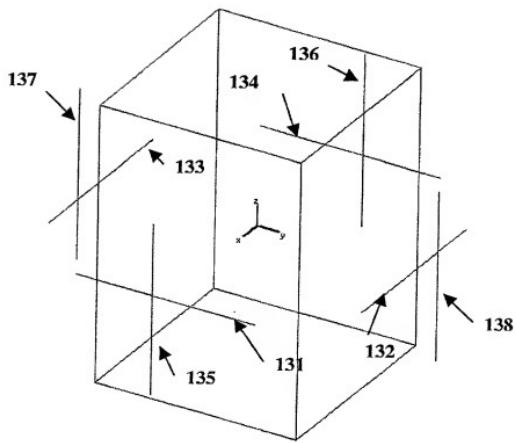


Figure 13

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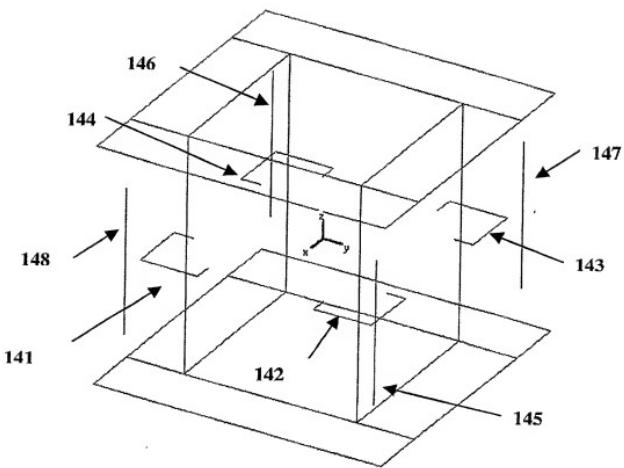


Figure 14

	Configuration 1	Configuration 2	
Average signal level (dB)	180°	4.6	180°
	90°	6.7	90°
Signal level spread (dB)	180°	1.4	180°
	90°	0.5	90°
Average standard deviation (dB)	180°	4.1	180°
	90°	1.4	90°
Lowest maximum achievable diversity gain (dB) (unit 0° orientation)	11.5	15	
Lowest maximum achievable diversity gain (dB) (unit 15° orientation)	14.5	14	

Figure 15

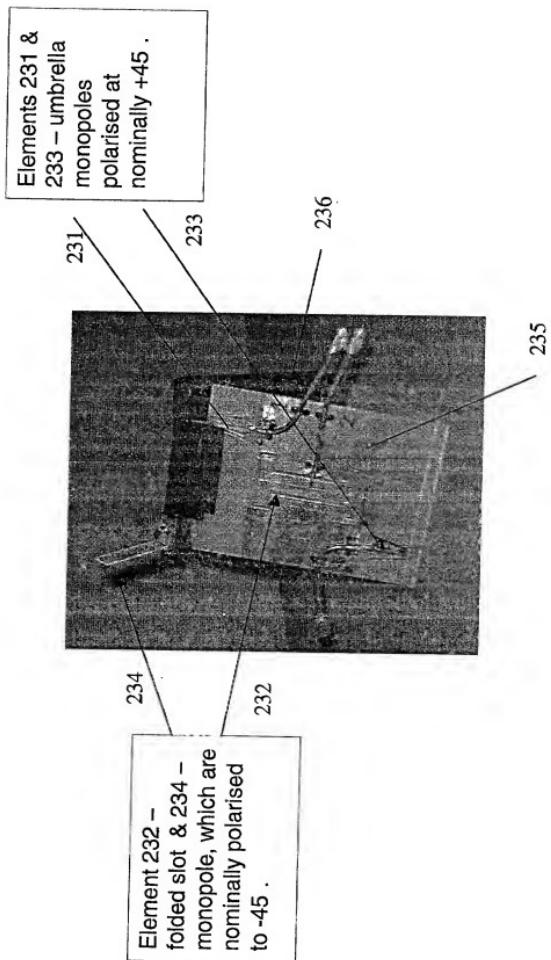


FIGURE 16

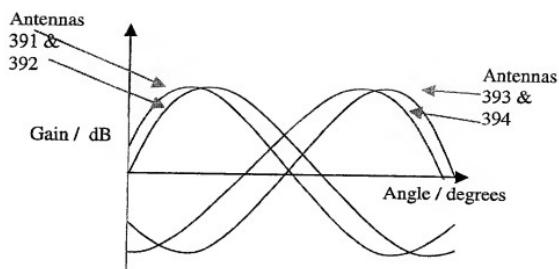


Figure 17

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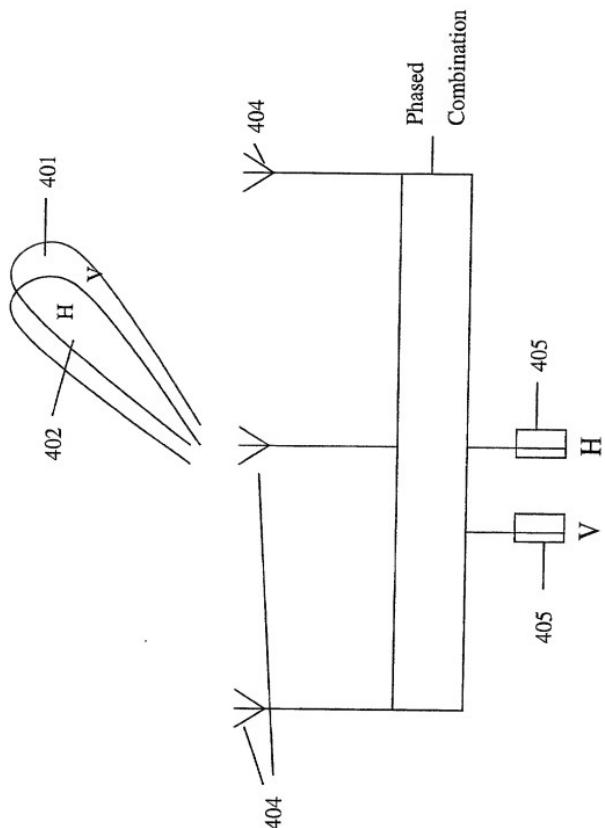


FIGURE 18